REMARKS

Status of the Claims

Claims 7-9 are pending in this application. Claims 8 and 9 have been amended to correct dependency. Thus, no new matter has been added by amendment.

Information Disclosure Statement

Applicant's representative notes that on two separate instances the box on Applicants' PTO-1449 forms has not been initialed for two references.

In the first instance, Applicants cited a webpage authored by Dr. Ashley Hill on their 1449 form and provided a printed paper copy of the webpage. See file history entry dated 11 Dec 08, list of references cited by Applicant. The Examiner has not initialed to indicate that the reference has been considered, stating "cannot be published." However, there is no Rule or guideline that requires that information submitted to the Office in an Information Disclosure Statement must be published. Further, Applicants' representative draws the Examiner's attention to the web address and date printed at the bottom of the reference. The web address and date are strong evidence that the printed paper copy of the webpage *were* publicly available—and therefore published—on the date indicated. Applicants' representative does note that one character of the internet address is obscured on the paper copy and that the address provided on the 1449 form was incorrect. The correct address is http://www.obgyn.net/women/articles/molarpreg_dah.htm. By following this address, one can still locate a publicly available webpage authored by Dr. Ashley Hill. Applicants regret any confusion related to the actual web address and have once again submitted the reference along with a 1449 form listing the correct internet address. Applicants request that the Examiner initial the 1449 form.

In the second instance, Applicants neglected to provide the page numbers for the reference GlaxoSmithKline Biologicals, No. 001, "Antigen specific Cancer Immunotherapeutics: Educating the patient's immune defense to fight cancer" (2007) The Examiner therefore struck the citation from the 1449 form. See file history entry dated 11 Dec 2008, list of references cited by Applicant. Accordingly, Applicants have submitted a 1449 form listing the correct citation, along with a copy of the reference.

Applicants regret any confusion caused and request that the Examiner initial the corrected 1449 form.

The Rejections Under 35 U.S.C. § 112, 1st ¶, Enablement, Should Be Withdrawn

Claims 7-9 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly nonenabled. Applicants respectfully traverse.

Only two issues remain in the present rejection:

Issue (1) Is the rejection's claim construction legally incorrect?

Issue (2) Are the rejection's factual findings conclusory or contradicted by the evidence of record?

Careful analysis leads to the conclusion that the answer to both questions is 'yes,' as set forth in the following paragraphs. The rejection should be withdrawn, accordingly.

Issue (1). The Office's claim construction is legally incorrect. The rejection misconstrues the claims as if they recite an endpoint of tumor reduction. Applicants have brought this erroneous construction to the attention of the Office. Nonetheless, the rejection maintains that:

> In light of the specification, the claims are reasonably interpreted as a method for treating cancer, such as reduction of cancer cell growth in vivo, or a method for inducing an immune response in a human or non-human animal having cancer.

See the Office Action dated 11 Dec 08, page 4. The rejection then dismisses all of Applicants' experimental evidence, alleging it is not relevant because it is either (i) in vitro data or (ii) was not carried out in an animal with cancer.

Contrary to the rejection's claims construction, the independent claim actually reads:

> A method of inducing an immunoresponse in a human or non-human animal comprising administering a peptide fragment of SEQ ID NO:2 to the human or non-human animal, wherein the peptide fragment comprises SEQ ID NO:25.

No limitation involving the reduction of cancer cell growth in vivo or to treating an animal with cancer is recited in the pending claims. Rather, these limitations are read into the claims by the rejection in contravention of MPEP § 2107.02, which prohibits reading into the claim limitations that are not there.

It is elemental that examination of the claims begins with their correct construction. Applicants submit that this has not been accomplished. Accordingly, Applicants request (i) that the finality of the present rejection be withdrawn and (ii) that they receive examination of the claims under a correct claims construction.

Issue (2). The rejection's factual findings are conclusory or contradicted by the evidence of record. The rejection also makes numerous allegations of fact relating to the state of the art or the methods disclosed in Applicants' specification. Generally, these findings are either unsupported by evidence and therefore conclusory, or they are contradicted by the evidence of record. The remaining paragraphs of this section deal with each of these allegations.

First, the Office makes general allegations regarding the state of the art of cancer therapeutics, relying upon Kirkin, Boone, Gaiger, Ezzell, and Spitler (of record). Applicants submitted a reference that rebuts Gaiger. (See the Response, dated 18 Jul 07, discussing Oka *et al.* which demonstrates that WT-1 peptides are immunogenic and effective in vivo.)

With respect to Oka *et al.*, the rejection maintains that Oka *et al.* does not contradict Gaiger because the WT-1 peptide used in Oka *et al.* is allegedly different from that used in Gaiger. This misses the point, however. The rejection initially alleged that WT-1 peptides were not efficacious for tumor regression based upon Gaiger et al. Applicants submitted a reference rebutting Gaiger et al. by showing that WT-1 peptides can induce an immune response efficacious for tumor regression. Now the rejection maintains that Oka et al. is irrelevant because they used peptides different from Gaiger et al. Applicants do not agree; Oka et al. is relevant to rebut the rejection's reliance on Gaiger et al.

The rest of these references are irrelevant because of their age: Kirkin, Boone, Ezzell, and Spitler were published in the 1990s. It is elemental that a "state of the art" reference must bear some relevance to the state of the art at the time of an application's priority. The MPEP makes absolutely clear that the state of the art must be established contemporaneous to an applicants' filing date:

> The relative skill of those in the art refers to the skill of those in the art in relation to the subject matter to which the claimed invention pertains at the time the application was filed.

See MPEP § 2164.05(b).

> The state of the art for a given technology is not static in time. It is entirely possible that a disclosure filed on January 2, 1990, would not have been enabled. However, if the same disclosure had been filed on January 2, 1996, it might have enabled the claims. Therefore, the state of the prior art must be evaluated for each application based on its filing date.

Thus, even if the inquiry into the state of the art of cancer therapeutics were relevant to the present rejection, the rejection's findings based on Kirkin, Boone, Ezzell, and Spitler are relevant only to a time in the 1990s.

Relying on White, the rejection maintains that "[o]ne cannot predict that the claimed antigen is not internalized or downregulated in cancer cells, in view of the teaching of White et al." But White *et al.* relates to whether or not a cancer antigen may be internalized such that tumor cells might eventually escape immune surveillance. If the eventual escape of tumor cells during treatment should render a cancer immunotherapeutic nonenabled, then even approved monoclonal Ab therapies such as bevacizumab (Avastin) are to be considered nonenabled. (Because tumor escape has been reported with monoclonal immunotherapeutics such as Avastin.) It would be non-sensical to conclude that a FDA approved immunotherapeutic is non-enabled. In any case, no therapeutic endpoint is recited in the present claims; White is not relevant.

The rejection now relies on a new reference: Bodey (2000) "Failure of Cancer Vaccines: The Significant limitations of this Approach to Immunotherapy," *Anticancer Reaserch* 20:2665-76. Applicants' representative has carefully reviewed the reference and notes the following points. First, the "failure" referred to in the title refers to failure of therapeutics in *clinical trials*. See the abstract, column 2. But success in clinical trials is not an appropriate standard for enablement. See *In re Brana*, 51 F.3d 1560, 1566, 34 USPQ2d 1436, 1441 (Fed. Cir. 1995) (requiring information of the sort necessary for regulatory approval not an appropriate standard by which to judge patentability). Further, Bodey's conclusion is actually that "The use of cancer vaccines seems, at present, destined to remain limited to their employment as adjuvants to both traditional

therapies and in the management of minimal residual disease following surgical resection of the primary cancer mass." In other words, Bodey actually constitutes evidence that a person of skill in the relevant art in 2000 would conclude that an immunotherapeutic *would be useful*, albeit in a limited context. Thus, *even if Applicants claim did recite a therapeutic endpoint*, Bodey would support a conclusion that the skilled person would understand how to make and use the subject matter.

For the reasons stated above, the weight of the evidence of record supports Applicants position regarding the disputed facts. Because of the lack of factual support, the rejection's position regarding cancer immunotherapies must be withdrawn.

Miscellaneous.

The rejection also maintains that it is not applying an inappropriate standard for enablement under *In re Brana*, alleging that "all it requires is an in vivo reduction of cancer cell growth, and does not require clinical trial." Based on the references it cites, however, it is clear that the rejection considers as failure an immune therapy (i) subject to tumor escape (White) or (ii) with disappointing clinical trials in humans (Bodey). Such a standard is inappropriate under *In re Brana*. Further, requiring any sort of in vivo tumor reduction endpoint is inappropriate for the reasons stated in *Issue (1)*.

Applicants have pointed out that the rejection's improper claim construction harms Applicants because by limiting the claims to therapeutic methods, the Office fails to consider other *bona fide* uses for Applicants' claimed methods for inducing an immunoresponse. Applicants have disclosed that their methods can be used "to generate antibodies or reagents specific for the polypeptide of the present invention, as diagnostic reagents to detect...genetic or biochemical markers in blood or tissues that will enable the detection of very early changes along the carcinogenesis pathway will help in determining the best treatment for the patient." See US20050260634, paragraphs [0182]-[183].

The rejection finds Applicants utilities unpersuasive because "...the claimed method also encompasses a method for making an antibody in a healthy human...[and] one would not use a healthy human to produce an antibody for commercial application."

Apparently the rejection would require Applicant to limit the claim to antibody production in a non-human animal. Applicants maintain that there is no legal precedent for requiring an applicant to recite a utility in a claim. This basis for the rejection must be withdrawn.

Claim 9.

At one point during prosecution, the rejection alleged with respect to claim 9 that "there is no evidence that the claimed peptide has a synergistic effect on the added adjuvants, concerning cancer treatment." Applicants can find no reason for the Office to require a showing of synergy and requested clarification. Applicants respectfully request that this separate rejection of claim 9 be withdrawn.

The Commissioner is hereby authorized to charge any fees required or credit any overpayment to Deposit Account No. 07-1392.

Respectfully submitted,

/Eric J. Kron/
Eric J. Kron
Attorney for Applicant
Registration No. 45,941

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GlaxoSmithKline
Corporate Intellectual Property
Five Moore Drive
P.O. Box 13398
Research Triangle Park, NC 27709-3398
Phone: 919-483-8961
Facsimile: 919-483-7988